Title (en)

SEMICONDUCTOR LASER DEVICE WITH A GRADED-INDEX GUIDE, AND METHOD OF REALISING SUCH A DEVICE

Publication

EP 0096613 B1 19860716 (FR)

Application

EP 83401029 A 19830524

Priority

FR 8209735 A 19820604

Abstract (en)

[origin: EP0096613A1] 1. Laser-type photoemission semiconductor device whose light is emitted by an active layer with the geometry of a tape, in the interior of which it is guided by a gradient of the refractive index, comprising a substrate (1) engraved with a groove (17) of V shape in which is buried the active layer (19) of the laser, included between two confining layers (18, 20) with which it forms two heterojunctions of concave form whose concavity is turned towards the outer confinement layer (20), the active layer (19) having a thickness zero at its edges in contact with the groove (17), likewise comprising a contacting layer (21) disposed on the outer confinement layer (20) and two metallizations (24, 25) for electrical contacting disposed on the two major faces of the substrate (1), said laser being characterized in that on the one hand the first confinement layer (18), the active layer (19) and the second confinement layer (20) are limited to the interior of the engraved groove (17) and in that on the other hand the upper face of the contact layer (21) in the groove (17) is at the same level as the upper face of the substrate (1) outside the groove (17), the upper contacting metallization (24) disposed on the contact layer (21) being insulated from the substrate (1) outside the groove (17).

IPC 1-7

H01S 3/19

IPC 8 full level

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CPC (source: EP KR)

H01L 27/14 (2013.01 - KR); **H01S 5/20** (2013.01 - EP); **H01S 5/24** (2013.01 - EP); H01S 5/2059 (2013.01 - EP); H01S 5/2237 (2013.01 - EP)

Citation (examination)

- APPLIED PHYSICS LETTERS, vol. 38, no. 8, avril 1981, pages 605-606, American Institute of Physics, New York, USA, K. SHIMA et al.: "Buried convex waveguide structure (GaA1) as injection lasers"
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Designated contracting state (EPC)

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DOCDB simple family (publication)

EP 0096613 A1 19831221; **EP 0096613 B1 19860716**; CA 1215160 A 19861209; DE 3364511 D1 19860821; FR 2528234 A1 19831209; FR 2528234 B1 19850517; JP S58219772 A 19831221; KR 840005276 A 19841105

DOCDB simple family (application)

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